Anatomy of the Araliaceae.—VAN TIEGHEM[43] has published the results of a very extended anatomical study of the Araliaceae as a basis for their classification. He is convinced that he has discovered anatomical characters that are of great service in this way, and he applies them in establishing groups of genera, in making diagnoses of genera more precise, and in clearing up the positions of a number of critical species. The following six new genera are characterized: *Bonnierella*, *Mesopanax*, *Plerandropsis*, *Octotheca*, *Strobilopanax*, *Schizomeryta*. —J. M. C.

Germination among palms.—GATIN[44] has published an extended study of germination among palms, having included in his researches 58 species, representing 33 genera. The first and far the larger part of the paper deals with what are called "anatomical" studies, and one conclusion that is reached, among several others, is that the "cotyledon," so far as palms are concerned, is a single leaf and not a phylogenetic coalescence of two leaves. The second part deals with the chemistry of germination.—J. M. C.

Water relations of the coconut.—The anatomy of the root and leaf of this palm, as well as the conditions affecting the entrance and passage of water through the plant, have been investigated by COPELAND.[45] Maximum transpiration is found to favor maximum yield of fruit. Wind and intense sunlight accelerate transpiration. The roots should be abundantly supplied with water, though an excess is injurious. Irrigation is altogether practical.—RAYMOND H. POND.

Fossil roots of Sequoia.—LIGNIER[46] has identified the roots called *Radiculites reticulatus* as those of Sequoia, or of some allied form as Taxodium. The material studied is from the Stephanian of Grand' Croix, and its distinguishing feature is the reticulated cortical parenchyma. Comparing it with roots of similar structure in living plants, the conclusion is reached that it most nearly resembles the structure observed in the root of *Sequoia gigantea*.—J. M. C.

N. Am. Vernonieae.—GLEASON[47] has published a revision of the North American species of Vernonieae. Seventeen genera are characterized, two of which (*Eremosis* and *Orthopappus*) are new. The species number 143, of which 28 are new. The large genus is Vernonia, with 99 species, 25 of which are new; and the new genus Eremosis includes 15 species, 13 of which have heretofore been assigned usually to Vernonia.—J. M. C.

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[43] VAN TIEGHEM, PH., Recherches anatomiques sur la classification des Araliacées. Ann. Sci. Nat. Bot. IX. **4**:1–208. *figs. 54.* 1906.

[44] GATIN, C., Recherches sur la germination des palmiers. Ann. Sci. Nat. Bot. IX. **3**:191–315. *pls. 11. figs. 58.* 1906.

[45] COPELAND, E. B., On the water relations of the coconut palm. Philippine Jour. Sci. 1: 6–57. *pls. 3.* 1906.

[46] LIGNIER, O., *Radiculites reticulatus*, radicelle fossile de Séquoinée. Bull. Soc. Bot. France IV. **6**:193–201. *figs. 5.* 1906.

[47] GLEASON, H. A., A revision of the North American Vernonieae. Bull. N. Y. Bot. Gard. **4**:144–243. 1906.